1: Conzemius M-4, 5 (1921) 1932
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133 In front of the coast, especially from Caratasca Lagoon to Monkey Point, or Punta Mico, are scattered numerous small islands, cays, coral reefs, shoals, and sand banks, which render navigation rather difficult.

The land rises gradually from the sea. The transverse ranges, radiating from the principal chain in the interior, form a series of terraces which gradually lessen in elevation until they disappear in the low coastal region. Low hills are met with at about 100 to 150 miles inland. Small isolated hills exist at different points within a short distance from the shore, and at Punta Mico and westward of Iriona spurs of the great central chain extend to the sea.

There are no active volcanoes. Earthquakes are not of frequent occurrence and they never do any damage; the heavy thunder occasionally conveys the impression that the earth is shaking.

133 487 HYDROGRAPHY.—The whole of this area is well watered by numerous streams running nearly parallel to each other; they flow into the Caribbean Sea, or rather into a chain of so-called lagoons or brackish water seas, of which the largest one is that of Caratasca. These water sheets are situated parallel with the coast and are separated from the sea, as well as from each other, by low, narrow, sandy necks of land, called locally "haulovers," from the custom of dragging the canoes over them. Thanks to this inland water system, canoes may proceed in smooth water, except for short intervals, from Iriona to Bluefields, thus avoiding the dangerous and unpleasant sea voyage during rough weather.

The rivers are in many parts the only means of communication. In the lower part of their course they are navigable for small sailing vessels, flat-bottomed steamboats, and motor boats. Beyond the region of the falls and rapids only small canoes and pitpans may continue, and they with great difficulty. The largest rivers of the Mosquito Coast are the following: Aguan, Tinto, Patuca, Coco (or Wanks), Grande (or Great), Escondido (or Bluefields), and San Juan.

During flood times these streams rise tremendously, occasionally as much as 40 feet during a single night. The crumbling banks bring down trees which, sweeping down the rapid current, render navigation dangerous. At places where the banks are low the neighboring country is inundated. These floods disappear as rapidly as they come. Owing to the great variations in level to which these rivers are subject, traffic is stopped or impeded occasionally; during the rainy season on account of the great impetuosity of the water and during the dry season from inadequate draft. In this respect Rio San Juan is an exception, the steadiness of its flow being maintained by the two great lakes of Nicaragua which act like a reservoir, and of which it is the only outlet.

1: Conzemius M-4, 5 (1921) 1932
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The sediment, trees, logs, and the like, brought down by the rivers are deposited at their mouth at the sea, thus forming dangerous sand banks with only a few feet of water, which can be crossed in safety only by vessels of little draft. These openings into the sea, or bars, as they are called, are much safer when the streams flow first into a lagoon, instead of directly into the sea, for in that case the sediment is deposited in the lagoon.

CLIMATE.—The climate of the country is tropical, but it is greatly modified by the configuration of the soil and the prevailing winds. The nights are always cool. The average temperature is about 80° F. (26° C.); the thermometer rarely registers higher than 90° F. (32° C.) or falls below 65° F. (17° C.). January is the coldest month of the year.

The country is not as unhealthy as is generally supposed. The old English authors considered it fairly good, and there is no justification for the bad reputation it has now, not only among Europeans and North Americans but also among the Central Americans inhabiting the highlands of the interior or the Pacific slope. Numerous foreigners have lived in the country many years and have retained their health. Unless one is particularly susceptible to malaria or other tropical diseases, no bad effects are liable to attend a prolonged sojourn in the country, provided proper care is taken.

The cool sea breeze, which blows almost constantly around the lagoons, renders the air fresh and agreeable. During eight months of the year the east trades blow nearly uninterruptedly and greatly modify the effects of the heat, so that the latter is never suffocating. The great difference from our own climate does not consist so much in the higher temperature recorded as in the absence of really cold weather, which contributes so much to the vigor and "pep" of northern people.

From November to February northers may appear on the Nicaraguan coast, but they are not so dangerous to navigation as on the shore of Honduras. During a wet norther the weather is disagreeably cold, but a dry norther is pleasant and invigorating. From the middle of June to the middle of August the Nicaraguan coast is subject to squalls and sudden gusts of wind from the southeast and the south, which are a great danger to seagoing canoes. Revolving storms, commonly called hurricanes, occur occasionally on the coast, but they are never so violent and destructive as in the West Indies or around the Gulf of Mexico.

RAINFALL.—One may practically speak of two dry and two wet seasons on the Mosquito Coast. But these seasons are not well defined; the change from the rainy to the dry period, or vice versa, is not as marked as in the interior of Central America or on the Pacific

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4 o'clock; that is when the animals and birds are feeding. During the remainder of the day the forest is quiet, and most of the birds roost in the dense treetops.

TRAVEL TO THE HUNTING GROUND.—Travel is effected chiefly by small pitpans, for the Indians are canoe men by necessity, the rivers being their roads. They leave their boat at a certain spot, the parting point of a trail leading to a good hunting ground, that is, a region abundant in fruit trees. To a stranger such hunting trails are barely perceptible; here and there marks on trees made with the machete and broken twigs indicate the direction. The Indians always travel in single file, even when there is a broad road, or when they traverse open country. In marching they always glance at the sun and they observe the direction the clouds are moving, that is from northeast to southwest on the Mosquito Coast. Intuitively they keep in their mind a mental picture of the direction they came from. They walk along, silent and watchful, and at times stand still to listen.

STALKING.—The Indian is an expert stalker, but not a true sportsman; he rarely shoots at the game while it is in motion, except in the midst of a flock of flying birds. He therefore rarely misses the mark, but is not necessarily a good marksman. Owing to his scarce clothing he moves about the forest without making any noise. His color also appears to a certain degree to assimilate with the forest.

IMITATING THE CALL OF THE GAME.—The Indian huntsman imitates the call of animals and birds, in order to call them within arrow or gun shot. Bone whistles (M.: *kyaki wasbaya;* S.: *malka kuñ*) are used to lure the agouti (*Dasyprocta* sp.) under certain trees at the time when the latter drop their fruits. This trick is especially successful during the pairing season of certain animals. The Indian is thoroughly acquainted with the habits of the game.

HUNTING DOGS.—A lot of skinny, mangy dogs, esteemed for their skill in stirring up the game, are found in the Indian villages. With the aid of large dogs trained for the purpose, the jaguar is cornered and the puma is driven up a tree, where it may easily be shot by the hunter. When the Indian ascends a stream he keeps close to the river bank and lets his dog range the woods. The latter, upon scaring up some game, will give tongue immediately and endeavor to drive it to the water. This is the common way of hunting the paca which lives at the river bank and plunges into the water when pursued. This rodent also enters hollow trees and burrows in the ground and is then difficult to secure. Its meat is delicious and is appreciated by the average foreigner.

Before leaving for the chase the dog's snout is rubbed with certain herbs, so that the game shall not be able to smell it. This procedure is also supposed to clear the scent of the dog and sharpen his perceptions. An infusion from a small parasitic plant, called in Spanish

2: Kirchhoff E-4 (no date) 1948
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wore tight cotton bands below the knees and above the ankles. Today 301
woven bands of glass beads are worn around the neck, wrists, and ankles. Straw hats are decorated with feathers and jaguar teeth (*Mosquito, Paya*).

Black paint is smeared over the body by the men (*Sumo, Mosquito,* 302
Paya) as a decoration and for protection from insects. Geometrical de- [751]
signs are drawn in red paint, mainly by the women. The *Sumo, Mosquito,* [531]
and *Paya* tattooed geometrical designs upon the face, arms, and breast. 304
The *Sumo* men made ornamental scars on their faces and chipped their teeth. All *Sumo* tribes except the *Bawihka* practiced head deformation. During infancy a folding flap of wood at the top of the cradle was tied firmly to the crown of the head.

TRANSPORTATION

Loads are carried with a band passing over the head (women) or 482
across the chest (men). Children are carried on the back in a blanket, [855]
the points of which are tied in front. [987]

The country has hunting trails but no roads. Most travel is done 501
in dugout canoes propelled with poles and broad-bladed paddles. Rafts are used for down-river traffic. Large keeled canoes, often equipped with a sail, are used at sea.

MANUFACTURES

Basketry.—Crude baskets, mainly of wickerwork, are made chiefly for 283
storage bins. Bark and silk grass fiber bags are very common. Bark fiber is used also to make tumplines, hammocks, and such.

Bark cloth.—Bark cloth is beaten out of ficus-tree bark with a grooved 287
wooden mallet.

Weaving.—Cotton is spun on a spindle, which has a whorl and is 286
rotated in a gourd. Coarse-textured but soft cotton cloth is woven on a two-beam loom. Thread was formerly dyed and designs were woven in the cloth. Sometimes feathers, particularly a fringe of white Muscovy duck down, were incorporated into the fabric.

Ceramics.—Pottery making has been described only from the *Sumo* 323
and *Paya*, although pottery was formerly made by all tribes. Women model small vessels out of a lump of clay but build up large ones with coils. They polish them with a pebble, dry them for several days, and fire them in the open. Pottery types include jars about 4 feet (1.3 m.) high, various types of jugs, water jars, small bowls, griddles, and tobacco pipes. All vessels have a convex base.

Miscellaneous manufactures.—Metates are still used by the *Paya* 415
and *Sumo*, and they have recently been adopted by the *Jicaque*, but the *Mosquito* are said no longer to use them. Metates are flat-topped boulders, which only rarely have a trimmed surface. Manos are round pebbles.

3: Pijoan D-5 (ca. 1945) 1946
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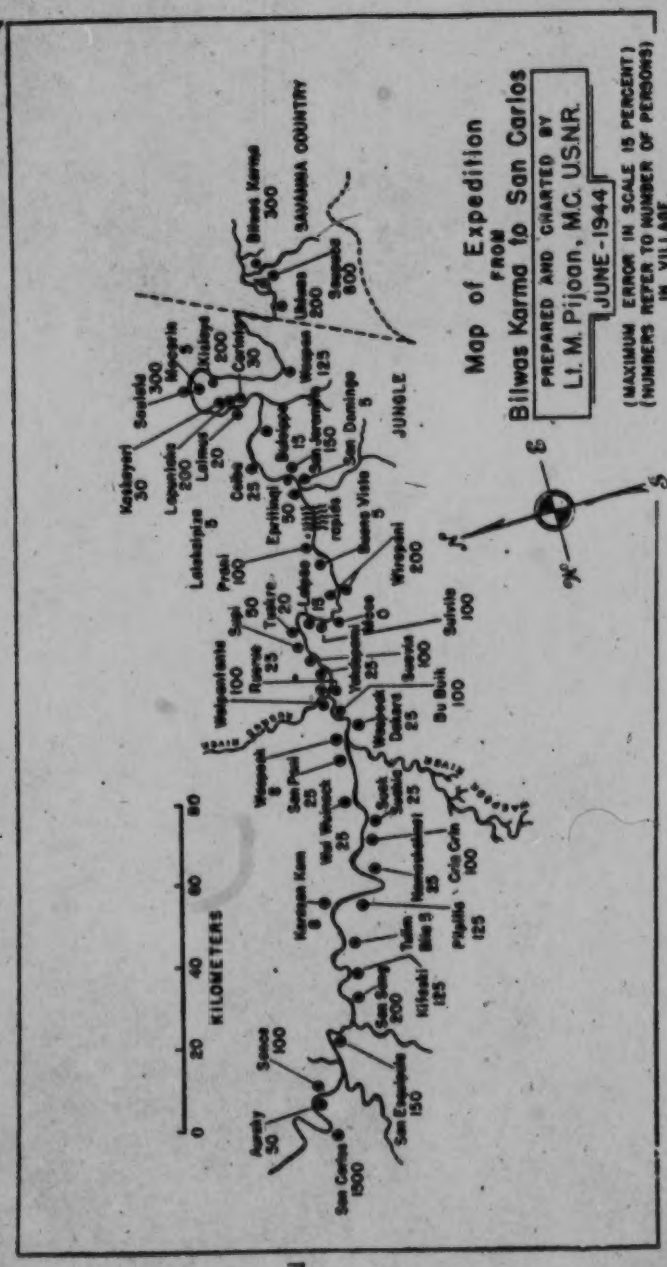

[p.5]

3: Pijoan D-5 (ca. 1945) 1946
SA15 Mosquito SA15

The Miskito Indians, numbering about 20,000, are a mixed race, since there has been much inter-marrying with negroes, creoles, Spaniards, Caribs, Sumu, Syrians and Chinese. About one-half of them have negroid physical characteristics, another third non-specific physical features and a few appear to be of pure Indian blood. There is, however, the same behavior pattern in all of them; they live together and there is no cultural differentiation on a physical basis. The culture and language are predominantly Indian, though some of them speak a little English or Spanish. The name "Mosquito Coast" may have been derived from the Indian tribe, the Miskito, or it may have been derived from the numerous mosquitoes found in the area.

The climate is humid and tropical. The average temperature along the seacoast rarely registers below 65° F. or above 90° F. Such pleasant temperatures are due to the trade winds that blow fairly steadily for about seven months of the year. From Bilwas Karma inland, the heat is intense, humid, and at times unbearable. At higher altitudes near the headwaters of the Coco (or Wanks) River, conditions are less severe. The whole area is well watered by many streams which empty into the larger rivers, which in turn drain into the Caribbean sea. In the jungle area these rivers are the only means of communication or transport. During flood times the rivers rise tremendously, often as much as thirty feet in a single night, the crumbling banks bringing down trees and everything along the edge. For this reason the villages are built high up on the banks and usually some distance from the stream. The average rainfall is reported to vary from 250 to 320 inches a year. There are two dry and two wet seasons each year, but these conditions are only relative, since it is always humid in the interior. The dryest seasons are from about March to May and from late August to early October. The remainder of the time it rains almost incessantly, sometimes all day. In the dry season light showers occur frequently. These geophysical conditions contribute significantly to the food-agricultural status of the people.

Geographically the area can be divided as follows: along the seashore it is sandy, with an inland belt of about twenty miles, consisting of swamps; then an area fifty to one hundred miles wide of intermittent savannah, and finally the thick, dense, somewhat impenetrable jungle which covers everything, even the mountains. Violent winds and hurricanes are not infrequent.

Besides the Miskito and the Sumu, two other Indian tribes, the Paya and the Rama, live in eastern Nicaragua. The population of these tribes is unknown, but it is considered to be about 500. Conzemius[1] reported in 1932 that they numbered about 700 but stated that they